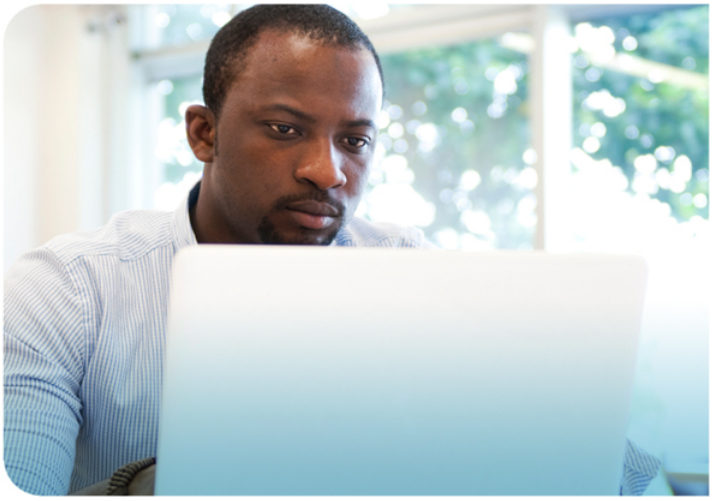
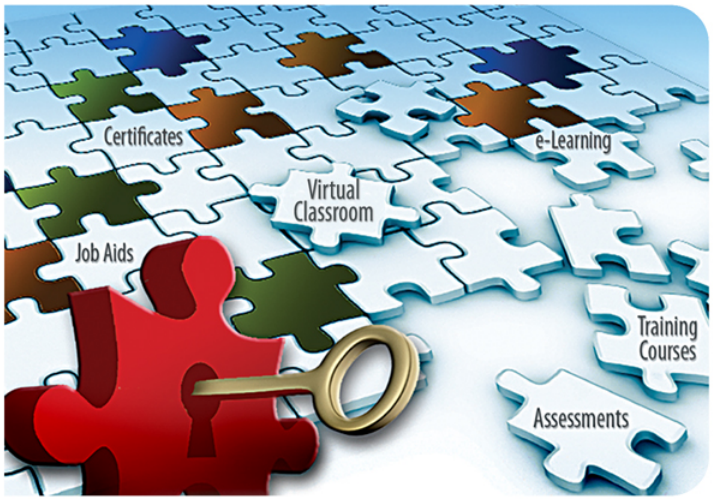
Virtual Classroom Course Description

Machine-Level Design Optimization





Course Purpose

This course covers best practices for architecting control solutions for machines. Your instructor will show you how to size and select drives, motors, control platforms and machine-level networks and then you will practice these tasks with an example application. The design tools and best practices covered in the course aim to optimize and reduce your build time with machine-level design.

Course Number

Session 1: VC-MLDO-01
Machine-Level Design Optimization: Drive and Motor Selection
Session 2: VC-MLDO-02
Machine-Level Design Optimization: Networks, Controller, and I/O Selection

Who Should Attend

Control engineers who design machine-level control applications should attend this course.

Student Materials

You will receive the following materials, in electronic format, to print on your own and use during the course:

- Machine-Level Design Optimization Workbook
- Motion Analyzer Software User Manual
- Required Course Setup: Installing and Activating Motion Analyzer and Integrated Architecture Builder Software

Prerequisites

There are no prerequisites for this course; however, experience with designing machine-level control applications is helpful.

Technology Requirements

- A computer and phone are required. For minimum computer requirements for the virtual classroom tool, please visit:

  http://support.webex.com/support/system-requirements.html

- For Session 1, Motion Analyzer software, version 6.1, must be installed and activated.
- For Session 2, Integrated Architecture Builder software, version 9.1, must be installed and activated.

  If you don't have the required software, your virtual classroom student materials will provide details on how to obtain the software.

Hands-On Practice

Hands-on practice is an important part of this course. During the sessions, your instructor will demonstrate how to perform tasks using Integrated Architecture Builder software and Motion Analyzer software and then you will practice these tasks:

- In the first session, you will practice sizing and selecting drives and motors using Motion Analyzer software.
- In the second session, you will practice selecting machine components using Integrated Architecture Builder software.

Next Learning Level

For training related to integrated motion, consider the following courses:

- VC-CCN300-02 Integrated Motion on EtherNet/IP: Commissioning
- CCN142 RSLogix 5000 Level 4: Motion Programming Using Ladder Logic (SERCOS)

Course Length

Session 1: 90 minutes
Session 2: 120 minutes

Virtual Classroom Learning Activities and Features

Rockwell Automation Virtual Classroom training is delivered by a live instructor using a blended learning style, which includes a combination of PowerPoint presentations, video, and/or animations, as well as interactive practice. Courses can include various learning activities and features:

- Polls/surveys
- Group and private chat
- White board
- Desktop sharing
- Passing control to students
- Break out rooms for small group discussion
- Check knowledge through testing

COURSE AGENDA

Session 1: Machine-Level Design Optimization: Drive and Motor Selection (VC-MLDO-01)

- Configuring a motion profile
- Configuring a mechanism
- Configuring transmissions
- Selecting a motor and drive

Session 2: Machine-Level Design Optimization: Networks, Controller and I/O Selection (VC-MLDO-02)

- Selecting network topology and components
- Selecting a controller and I/O
- Adding devices to the network
- Verifying network loading

IACET CEUs

Session 1 = 0.15 CEUs
Session 2 = 0.2 CEUs

To Register

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

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